

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 18, line 23, as follows:

Figure 1 is a block diagram illustrating a structure of a video signal processing apparatus according to a first embodiment of the present invention. In this figure 1, reference numeral 101 denotes a horizontal filter, numeral 102 denotes a time filter, numeral 103 denotes a comparator, numeral 104 denotes a gain adjuster, and numeral 105 denotes a subtracter.

Please amend the paragraph beginning at page 20, line 7, as follows:

Here, the filter characteristics of a combination of the horizontal filter 101 and the time filter 102 are shown in figure 2. Figure 2 represents an NTSC signal in three-dimensional frequency space. In figure 2, a large rectangular parallelepiped 1001 in the center represents a band of the luminance signal, and hatched small rectangular parallelepipeds 1002 represent bands of the color-difference signals. Further, rectangular parallelepipeds 1003 shown by dotted lines represent pass-bands of a combination of the horizontal filter 101 and the time filter 102. As can be seen from figure 2, the pass-bands 1003 of the combined filter includes parts of the bands 1002 of the color-difference signals, lying off the frequency bands 1005 in figure 17, which are extracted by a Y/C separation filter as color-difference signals. Therefore, with the combination of these filters, when the threshold judgement is performed for the absolute value of the filter output value using the comparator 103, high frequency components of the color-difference signals remaining in the luminance signal after the two-dimensional Y/C separation or three-dimensional Y/C separation can be extracted.

Please amend the paragraph beginning at page 38, line 25, as follows:

As described above, the video signal processing apparatus according to the third embodiment detects arbitrary noises among the dot crawls, the cross color interferences and the time-axis noises, utilizing horizontal filter output components, inter-frame difference data, horizontal filter output components of the inter-frame difference data of luminance signal data of a component video signal, and inter-frame difference data of color-difference signal data, and ~~eliminate~~ eliminates the detected noises.

Please amend the paragraph beginning at page 42, line 18, as follows:

Further, in this embodiment, an arbitrary combination of noises among three kinds of noises, i.e., the dot crawls, the cross color interferences, and the noises in the temporal direction, is eliminated, while an arbitrary combination of two kinds of noises may be eliminated. For example, when the noise detector 605 carries out processes in accordance with flows shown in figure 7 and 11 with the same structure as that of the video signal processing apparatus of figure 6, a video signal processing apparatus that can eliminate an arbitrary combination of the dot crawls and the noises in the temporal direction can be realized. In this variation, the operation of the noise detector 605 when deciding the output C is different from that in the video signal processing apparatus according to the third embodiment. To be more specific, initially in step S802, it is judged whether elimination of the time-axis noises is designated or not. When this judgement result is "Yes" the operation proceeds to step S803, and when the result is "No" the operation proceeds to step S807. In step S803, it is judged whether the absolute value of the output of the subtracter 607 is equal to or smaller than a third predetermined value. When the judgement result is "Yes" the operation proceeds to step S808, and when the result is "No" the

operation proceeds to step S807. In step S808, the output C is decided to be a value that is obtained by carrying out a nonlinear process for the output of the subtracter 607. In step S807 ~~S087~~, the output C is decided to be 0. Operations other than these are the same as those of the video signal processing apparatus according to the third embodiment. According to this variation, an arbitrary combination of the dot crawls and the noises in the temporal direction can be eliminated from the component video signal, with a simple hardware configuration.

Please amend the paragraph beginning at page 43, line 23, as follows:

Figure 12 is a block diagram illustrating a structure of another variation of the video signal processing apparatus according to the third embodiment, which can eliminate an arbitrary combination of the cross color interferences and the noises in the temporal direction. In this variation, the apparatus has the structure as shown in figure 12 and the noise detector 605 carries out processes in accordance ~~according~~ with flows shown in figures 13 and 8. The noise detector 605 decides the output A in accordance with flows shown in figure 13, and decides the output C in accordance with flows shown in figure 8. To be more specific, in the flows shown in figure 13, initially in step S704, it is judged whether elimination of time-axis noises is designated or not. When the judgement result is "Yes" the operation proceeds to step S707, and when this result is "No" the operation proceeds to step S708. In step S707, the output A is decided to be a value that is obtained by carrying out the nonlinear process for the output of the subtracter 606. In step S708, the output A is decided to be 0. Flows for deciding the output C are the same as the flows for deciding the output C in the video signal processing apparatus according to the third embodiment. According to this variation, an arbitrary combination of the cross color interferences and the noises in the temporal direction can be eliminated from the component

video signal, with a simple hardware configuration.

Please amend the paragraph beginning at page 44, line 21, as follows:

Figure 14 is a block diagram illustrating a structure of another variation of the video signal processing apparatus according to the third embodiment, which can eliminate an arbitrary combination of dot crawls and cross color interferences. In this variation, the apparatus has the structure as shown in figure 14, and the noise detector carries out processes in accordance with flows shown in figures 15 and 16. The noise detector 605 decides the output B in accordance with flows shown in figure 15 and decides the output C in accordance with flows shown in figure 16. To be more specific, in the flows shown in figure 15, initially in step S701, it is judged whether the elimination of dot crawls is designated or not. When this judgement result is "Yes" the operation proceeds to step S702, and when the result is "No" the operation proceeds to step S708. In step S702, it is judged whether the absolute value of the output of the horizontal filter 601 is equal to or larger than a first predetermined value. When this judgement result is "Yes" the operation proceeds to step S705, and when the result is "No" the operation proceeds to step S703. In step S705, the output B is decided to be the output of the horizontal filter 602, thereby finishing the operation. In step S703, it is judged whether the absolute value of the output of the horizontal filter 601 is equal to or larger than a second predetermined value. It is assumed here that the second predetermined value is smaller than the first predetermined value. When this judgement result is "Yes" the operation proceeds to step S706, and when the result is "No" the operation proceeds to step S708. In step S706, the output B is decided to be one-half of the output of the horizontal filter 602, thereby finishing the operation. In step S708, the output B is decided to be 0. Further, in the flows shown in figure 16, initially in step S804, it is judged

whether the elimination of cross color interferences is designated or not. When this judgement result is "Yes" the operation proceeds to step S805, and when this result is "No" the operation proceeds to step S807. In step S805, it is judged whether the absolute value of the output of the horizontal filter 602 is equal to or larger than a fourth predetermined value, and the output of the subtracter 606 is equal to or smaller than a fifth predetermined value. When this judgement result is "Yes" the operation proceeds to step 806, and when the result is "No" the operation proceeds to step S807. In step S806, the output C is decided to be one-half of the output of the subtracter 607. In step S807, the output C is decided to be 0. According to this variation, an arbitrary combination of the dot crawls and the cross color interferences can be eliminated from the component video signal, with a simple hardware configuration.